

DOCUMENT A00840

**MASSACHUSETTS WETLANDS
PROTECTION ACT**

**NEGATIVE DETERMINATION OF
APPLICABILITY**

**AND REQUEST FOR
DETERMINATION OF APPLICABILITY**

CITY OF CHELSEA, MA



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 2 – Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

A. General Information

Important:
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



From:

Chelsea
Conservation Commission

To: Applicant

Susan McArthur, MaDOT
Name
10 Park Plaza, Suite 4260
Mailing Address
Boston MA 02116
City/Town State Zip Code

Property Owner (if different from applicant):

Name
Mailing Address
City/Town State Zip Code

1. Title and Date (or Revised Date if applicable) of Final Plans and Other Documents:

| | |
|----------------------------|--------------|
| Figure 1 Project Locus Map | October 2013 |
| Title | Date |
| Figure 2 Delineation Map | October 2013 |
| Title | Date |
| Figure 3 Topographic Map | October 2013 |
| Title | Date |

2. Date Request Filed:

October 11, 2013

B. Determination

Pursuant to the authority of M.G.L. c. 131, § 40, the Conservation Commission considered your Request for Determination of Applicability, with its supporting documentation, and made the following Determination.

Project Description (if applicable):

Project Location:

Former Grand Junction Rail ROW, Eastern Ave to
Rockport Commuter Rail Line
Maps 22, 23, 31 and 40
Assessors Map/Plat Number

Chelsea
City/Town

Parcel/Lot Number



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 2 – Determination of Applicability

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B. Determination (cont.)

The following Determination(s) is/are applicable to the proposed site and/or project relative to the Wetlands Protection Act and regulations:

Positive Determination

Note: No work within the jurisdiction of the Wetlands Protection Act may proceed until a final Order of Conditions (issued following submittal of a Notice of Intent or Abbreviated Notice of Intent) or Order of Resource Area Delineation (issued following submittal of Simplified Review ANRAD) has been received from the issuing authority (i.e., Conservation Commission or the Department of Environmental Protection).

☐ 1. The area described on the referenced plan(s) is an area subject to protection under the Act. Removing, filling, dredging, or altering of the area requires the filing of a Notice of Intent.

☐ 2a. The boundary delineations of the following resource areas described on the referenced plan(s) are confirmed as accurate. Therefore, the resource area boundaries confirmed in this Determination are binding as to all decisions rendered pursuant to the Wetlands Protection Act and its regulations regarding such boundaries for as long as this Determination is valid.

☐ 2b. The boundaries of resource areas listed below are not confirmed by this Determination, regardless of whether such boundaries are contained on the plans attached to this Determination or to the Request for Determination.

☐ 3. The work described on referenced plan(s) and document(s) is within an area subject to protection under the Act and will remove, fill, dredge, or alter that area. Therefore, said work requires the filing of a Notice of Intent.

☐ 4. The work described on referenced plan(s) and document(s) is within the Buffer Zone and will alter an Area subject to protection under the Act. Therefore, said work requires the filing of a Notice of Intent or ANRAD Simplified Review (if work is limited to the Buffer Zone).

☐ 5. The area and/or work described on referenced plan(s) and document(s) is subject to review and approval by:

Name of Municipality

Pursuant to the following municipal wetland ordinance or bylaw:

Name

Ordinance or Bylaw Citation



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

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B. Determination (cont.)

- ☐ 6. The following area and/or work, if any, is subject to a municipal ordinance or bylaw but not subject to the Massachusetts Wetlands Protection Act:

- ☐ 7. If a Notice of Intent is filed for the work in the Riverfront Area described on referenced plan(s) and document(s), which includes all or part of the work described in the Request, the applicant must consider the following alternatives. (Refer to the wetland regulations at 10.58(4)c. for more information about the scope of alternatives requirements):

- ☐ Alternatives limited to the lot on which the project is located.
- ☐ Alternatives limited to the lot on which the project is located, the subdivided lots, and any adjacent lots formerly or presently owned by the same owner.
- ☐ Alternatives limited to the original parcel on which the project is located, the subdivided parcels, any adjacent parcels, and any other land which can reasonably be obtained within the municipality.
- ☐ Alternatives extend to any sites which can reasonably be obtained within the appropriate region of the state.

Negative Determination

Note: No further action under the Wetlands Protection Act is required by the applicant. However, if the Department is requested to issue a Superseding Determination of Applicability, work may not proceed on this project unless the Department fails to act on such request within 35 days of the date the request is post-marked for certified mail or hand delivered to the Department. Work may then proceed at the owner's risk only upon notice to the Department and to the Conservation Commission. Requirements for requests for Superseding Determinations are listed at the end of this document.

- ☒ 1. The area described in the Request is not an area subject to protection under the Act or the Buffer Zone.
- ☐ 2. The work described in the Request is within an area subject to protection under the Act, but will not remove, fill, dredge, or alter that area. Therefore, said work does not require the filing of a Notice of Intent.
- ☐ 3. The work described in the Request is within the Buffer Zone, as defined in the regulations, but will not alter an Area subject to protection under the Act. Therefore, said work does not require the filing of a Notice of Intent, subject to the following conditions (if any).

- ☐ 4. The work described in the Request is not within an Area subject to protection under the Act (including the Buffer Zone). Therefore, said work does not require the filing of a Notice of Intent, unless and until said work alters an Area subject to protection under the Act.



Massachusetts Department of Environmental Protection
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B. Determination (cont.)

- ☐ 5. The area described in the Request is subject to protection under the Act. Since the work described therein meets the requirements for the following exemption, as specified in the Act and the regulations, no Notice of Intent is required:

Exempt Activity (site applicable statutory/regulatory provisions)

- ☐ 6. The area and/or work described in the Request is not subject to review and approval by:

Chelsea

Name of Municipality

Pursuant to a municipal wetlands ordinance or bylaw.

Name

Ordinance or Bylaw Citation

C. Authorization

This Determination is issued to the applicant and delivered as follows:

☒ by hand delivery on

☐ by certified mail, return receipt requested on

December 3, 2013

Date

Date

This Determination is valid for **three years** from the date of issuance (except Determinations for Vegetation Management Plans which are valid for the duration of the Plan). This Determination does not relieve the applicant from complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.

This Determination must be signed by a majority of the Conservation Commission. A copy must be sent to the appropriate DEP Regional Office (see <http://www.mass.gov/eea/agencies/massdep/about/contacts/find-the-massdep-regional-office-for-your-city-or-town.html>) and the property owner (if different from the applicant).

Signatures:

December 3, 2013

Date



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 2 – Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

D. Appeals

The applicant, owner, any person aggrieved by this Determination, any owner of land abutting the land upon which the proposed work is to be done, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate Department of Environmental Protection Regional Office (see <http://www.mass.gov/eea/agencies/massdep/about/contacts/find-the-massdep-regional-office-for-your-city-or-town.html>) to issue a Superseding Determination of Applicability. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and Fee Transmittal Form (see Request for Departmental Action Fee Transmittal Form) as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Determination. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant if he/she is not the appellant. The request shall state clearly and concisely the objections to the Determination which is being appealed. To the extent that the Determination is based on a municipal ordinance or bylaw and not on the Massachusetts Wetlands Protection Act or regulations, the Department of Environmental Protection has no appellate jurisdiction.



Environment

Prepared for:
Massachusetts Department of Transportation
Boston, MA

Prepared by:
AECOM
Chelmsford, MA
60242256
October, 2013

Request for Determination of Applicability

Former Grand Junction Railroad Right of Way Eastern Avenue to Rockport Commuter Rail Line Chelsea, Massachusetts





Environment

Prepared for:
Massachusetts Department of Transportation
Boston, MA

Prepared by:
AECOM
Chelmsford, MA
60242256
October, 2013

Request for Determination of Applicability

Former Grand Junction Railroad Right of Way Eastern Avenue to Rockport Commuter Rail Line Chelsea, Massachusetts

A handwritten signature in blue ink, appearing to read "TJ Keough".

Prepared By Thomas J. Keough

A handwritten signature in black ink, appearing to read "Katie Barnicle".

Reviewed By Kathryn Barnicle, PWS

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WPA Form 1

**WPA Form 1- Request for Determination of Applicability**

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

A. General Information**Important:**

When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. Applicant:

Susan McArthur, Massachusetts Department of
Transportation

susan.mcarthur@state.ma.us

E-Mail Address

10 Park Plaza, Suite 4260

Mailing Address

Boston

MA

02116

City/Town

State

Zip Code

(857) 368-8807

(857) 368-0609

Phone Number

Fax Number (if applicable)

2. Representative (if any):

AECOM

Firm

Thomas Keough

thomas.keough@aecom.com

Contact Name

E-Mail Address

250 Apollo Drive

Mailing Address

Chelmsford

MA

01824

City/Town

State

Zip Code

978.905.2270

978.905.2101

Phone Number

Fax Number (if applicable)

B. Determinations

1. I request the Chelsea make the following determination(s). Check any that apply:
Conservation Commission

- ☒ a. whether the **area** depicted on plan(s) and/or map(s) referenced below is an area subject to jurisdiction of the Wetlands Protection Act.
- ☐ b. whether the **boundaries** of resource area(s) depicted on plan(s) and/or map(s) referenced below are accurately delineated.
- ☐ c. whether the **work** depicted on plan(s) referenced below is subject to the Wetlands Protection Act.
- ☐ d. whether the area and/or work depicted on plan(s) referenced below is subject to the jurisdiction of any **municipal wetlands ordinance** or **bylaw** of:

Name of Municipality

- ☐ e. whether the following **scope of alternatives** is adequate for work in the Riverfront Area as depicted on referenced plan(s).

**WPA Form 1 - Request for Determination of Applicability**

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C. Project Description

1. a. Project Location (use maps and plans to identify the location of the area subject to this request):

Former Grand Junction Railroad Right of Way
Eastern Avenue to Rockport Commuter Rail Line
22, 23, 31, and 40

Assessors Map/Plat Number

Chelsea

City/Town

no lot number assigned

Parcel/Lot Number

- b. Area Description (use additional paper, if necessary):

The site is a segment of the former Grand Junction Railroad Right of Way (ROW), which is now owned by the Commonwealth of Massachusetts. The ROW is approximately 45 feet wide and extends for approximately 4,000 linear feet in a northerly direction from Eastern Avenue up to the existing Rockport Commuter Rail Line, crossing Cottage Street and Bellingham Street along the way. The site is bordered by dense residential and commercial development along its entire route.

- c. Plan and/or Map Reference(s):

Figure 1 - USGS Locus Map

Title

10/13

Date

Figure 2 - Delineation Map

Title

6/13

Date

Figure 3 - Topographic Map

Title

10/13

Date

2. a. Work Description (use additional paper and/or provide plan(s) of work, if necessary):

Not applicable.



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C. Project Description (cont.)

b. Identify provisions of the Wetlands Protection Act or regulations which may exempt the applicant from having to file a Notice of Intent for all or part of the described work (use additional paper, if necessary).

Not applicable.

3. a. If this application is a Request for Determination of Scope of Alternatives for work in the Riverfront Area, indicate the one classification below that best describes the project.

- ☐ Single family house on a lot recorded on or before 8/1/96
- ☐ Single family house on a lot recorded after 8/1/96
- ☐ Expansion of an existing structure on a lot recorded after 8/1/96
- ☐ Project, other than a single family house or public project, where the applicant owned the lot before 8/7/96
- ☐ New agriculture or aquaculture project
- ☐ Public project where funds were appropriated prior to 8/7/96
- ☐ Project on a lot shown on an approved, definitive subdivision plan where there is a recorded deed restriction limiting total alteration of the Riverfront Area for the entire subdivision
- ☐ Residential subdivision; institutional, industrial, or commercial project
- ☐ Municipal project
- ☐ District, county, state, or federal government project
- ☐ Project required to evaluate off-site alternatives in more than one municipality in an Environmental Impact Report under MEPA or in an alternatives analysis pursuant to an application for a 404 permit from the U.S. Army Corps of Engineers or 401 Water Quality Certification from the Department of Environmental Protection.

b. Provide evidence (e.g., record of date subdivision lot was recorded) supporting the classification above (use additional paper and/or attach appropriate documents, if necessary.)

Not applicable.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Chelsea
City/Town

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D. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Request for Determination of Applicability and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge.

I further certify that the property owner, if different from the applicant, and the appropriate DEP Regional Office were sent a complete copy of this Request (including all appropriate documentation) simultaneously with the submittal of this Request to the Conservation Commission.

Failure by the applicant to send copies in a timely manner may result in dismissal of the Request for Determination of Applicability.

Name and address of the property owner:

Massachusetts Department of Transportation, Attn: Susan McArthur

Name

10 Park Plaza, Suite 4260

Mailing Address

Boston

City/Town

MA

State

02116

Zip Code

Signatures:

I also understand that notification of this Request will be placed in a local newspaper at my expense in accordance with Section 10.05(3)(b)(1) of the Wetlands Protection Act regulations.

Susan McArthur - MassDOT
Signature of Applicant

10/10/2013
Date

Signature of Representative (if any)

Date

Narrative

1.0 Introduction

On behalf of the Massachusetts Department of Transportation - Office of Transportation Planning (MassDOT), AECOM herein submits a Request for Determination of Applicability (RDA) to the city of Chelsea Conservation Commission (Commission) pursuant to the Massachusetts Wetlands Protection Act (WPA; MGL Ch. 131 s. 40) and its implementing regulations (310 CMR 10.00). MassDOT is requesting that the Commission review the enclosed documentation and determine whether or not the areas depicted on plans and maps (located in Appendix A) and described below in Section 2 are areas subject to jurisdiction of the WPA. Specifically, MassDOT is requesting that the Commission find that the isolated wet areas described below do not meet the criteria established at 310 CMR 10.55 to be considered Bordering Vegetated Wetlands, nor do they contain sufficient volume of flood storage and the criteria established at 310 CMR 10.57 to be considered Isolated Land Subject to Flooding.

2.0 Existing Conditions

The site is a segment of the former Grand Junction Railroad Right of Way (ROW), which is now owned by the Commonwealth of Massachusetts. The ROW is approximately 45 feet wide and extends for approximately 4,000 linear feet in a northerly direction from Eastern Avenue up to the existing Rockport Commuter Rail Line, crossing Cottage Street and Bellingham Street along the way (Figure 1, Appendix A). The site is bordered by dense residential and commercial development along its entire route.

Field Investigations and wetland delineations were performed on June 4, 2013 in accordance with the methodology established in the 1995 Massachusetts Department of Environmental Protection (MassDEP) *Delineating Bordering Vegetated Wetlands* policy guidebook, as well as the US Army Corps of Engineers' (USACE) 1987 *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Regions* (January 2012) (*USACE Regional Supplement Manual*). During the investigation, five (5) areas were identified as potential wetlands and inspected for the presence of hydrology, hydric soils, and a prevalence of hydrophytic vegetation. These areas are described below and presented on Figure 2 located in Appendix A. MassDEP Bordering Vegetated Wetland Field Data Forms are located in Appendix B.

Area W1 (W1-1 through W1-19)

Area W1 is located approximately 25 feet to the north of Cottage Street and extends approximately 120 feet northwest of the Bellingham Street Bridge, while spanning roughly the width of the ROW (~45 feet), and is approximately 0.25 acres (10,748 +/- square feet) in size. Area W1 is situated within an isolated depression with steep cut-slopes on either side. Topographic elevations range from approximately 13- feet (NAVD 1998) at the northern extent of the area, gradually sloping downwards to approximately elevation 11 at the southern extent.

No storm water inlet/outlet pipes or surface connections with any other jurisdictional wetlands were observed, and Area W1 does not border a creek, river, stream, pond or lakes. Hydrology is derived through surface sheet flow from adjacent vegetated uplands and expansive impervious surfaces. Approximately 6-inches of standing water was observed, most likely due to recent rain events from May 29th to June 5th, when approximately 1.34 inches of rain fall was recorded in close proximity to the ROW (Boston Water and Sewer Commission Charlestown collection site)

The dominant vegetation is common reed (*Phragmites australis*) and purple loosestrife (*Lythrum salicaria*). Other species commonly observed included soft rush (*Juncus canadensis*), bluejoint (*Calamagrostis canadensis*) and pussy willow (*Salix discolor*), which is consistent with plants typically found within wetlands and disturbed areas. Soils consist of a coarse railroad bed gravel (2-4" across in size) with no fine component (i.e., sand, silt or clay) and therefore could not be assessed for hydric soil characteristics. Because this type of situation would be considered a "problematic hydric soil" condition under the *USACE Regional Supplement Manual*, and indicators of hydrophytic vegetation and wetland hydrology are present, it is presumed that this area would be considered an isolated wetland.

Area W2 (W2-1 through W2-11)

Area W2 is approximately 0.06 acres (2,541 +/- square feet) in size and is located within a long narrow, isolated depression of compacted silty and gravelly soils. Topographic elevations range from approximately

15- feet (NAVD 1998) at the southern extent of the area, gradually sloping downwards to approximately elevation 13 at the northern extent.

No storm water inlet/outlet pipes or surface connections with any other jurisdictional areas were observed, and Area W2 does not border a creek, river, stream, pond or lakes. Similar to Area W1, portions of this area are dominated with common reed and purple loosestrife, but dense patches of fox sedge (*Carex vulpinoidea*) and soft rush were also observed. Hydrologic input is primarily surface sheet flow from adjacent vegetated uplands and dense residential development to the west. Surface water approximately 6-inches in depth was observed in Area W2 and is most likely due to the recent rain events discussed above. This surface water is likely perched on compacted silty soils, as despite only several inches difference in elevation between Area W2 and the adjacent uplands within the ROW, the water table was not observed in auger holes placed in adjacent uplands down to depth of 16". Indicators of hydrophytic vegetation and wetland hydrology are present, and it is presumed that this area would be considered an isolated wetland.

Areas UP3, UP4, and UP5

Three additional areas were investigated for a prevalence of hydrophytic vegetation, hydric soils and hydrology due to the presence of common reed growing within the ROW. These areas appear on Figure 2 as UP3, UP4 and UP5. Despite the presence of common reed throughout these three areas, which is categorized as a Facultative Wetland (FACW) plant species (*USACE – National Wetland Plant List, October 2012*), the remaining dominant plant species were Facultative Upland (FACU) and Obligate Upland (UPL), to include black raspberry (*Rubus occidentalis*), black locust (*Robinia pseudoacacia*), and common mugwort (*Asteris vulgaris*). No additional indicators of hydric soils or hydrology were observed. Therefore, these areas as presented on Figure 2 do not meet the criteria necessary to be considered a wetland using both federal and state wetland criteria.

UP3 is approximately 0.22 acres in size with 0.15 of that residing within the ROW. The additional 0.07 acres is located off-site to the east of the ROW and consists of common reed growing within a compacted gravel parking lot (see attached photos). Topographic elevations range from approximately 13- feet (NAVD 1998) at the southern extent of the area, sloping downward to approximately elevation 10.5- at the northern extent. Although common reed is a dominant plant within that portion of UP3 which lies within the ROW, nearly all the remaining vegetation is FACU or UPL. The only other wetland indicator plants observed included purple loosestrife (FACW), and rough-stemmed goldenrod (*Solidago rugosa*; FAC), neither of which were a dominant plant.

Finally, although the soils were disturbed throughout this area, no redoximorphic features or hydric indicators (e.g., depleted matrix) were observed within the fine component of the soil (i.e., sand and silt), and no indicators of hydrology were observed other than the puddles of water located in the off-site gravel parking lot (following recent rain events).

UP3 and UP4 were much smaller areas (approximately 150 square feet each), and exhibited the same characteristics as described above for UP3. That is, a prevalence of upland vegetation (despite the presence of common reed), disturbed soils with no hydric indicators and no indicators of hydrology.

No other potential wetland areas were observed throughout the remaining portions of ROW (see attached photographs in Appendix C). From Eastern Avenue to Cottage Street, the ROW is comprised by paved and gravel parking areas used by an adjacent trucking facility. From UP3, northwest to its junction with the existing Rockport Commuter Rail Line, the ROW is maintained lawn and recently landscaped areas.

3.0 Jurisdictional Determination

3.1 Bordering Vegetated Wetlands

The definition, critical characteristics, and boundaries of a Bordering Vegetated Wetlands are defined at 310 CMR 10.55(2) (a) through (c). As described in 310 CMR 10.55(2)(a) *"Bordering Vegetated Wetlands are freshwater wetlands which border on creeks, rivers, streams, ponds and lakes... are areas where the soils are saturated and/or inundated such that they support a predominance of wetland indicator plants"*.

As described above in Section 2, Areas W1 and W2 are saturated such that they support a predominance of wetland indicator plants, but they do not border on any creek, river, stream, pond or lake and are indicative of highly disturbed urban areas. Additionally, Areas W1 and W2 do not have any visible inlets or outlets and are not connected to one another or any other jurisdictional resource area by an intermittent or perennial stream. Therefore, Areas W1 and W2 as presented on Figure 2 do not meet the criteria for Bordering Vegetated Wetlands and are isolated wetlands not subject to WPA jurisdiction.

Areas UP3, UP4, and UP5 are not saturated such that they support a predominance of wetland indicator plants and do not exhibit any indicators of hydric soils or sufficient hydrology. Therefore Areas UP3, UP4, and UP5 as presented on Figure 2 do not meet the criteria for Bordering Vegetated Wetlands and are not subject to WPA jurisdiction.

3.2 Isolated Land Subject to Flooding

The definition, critical characteristics, and boundaries of Isolated Land Subject to Flooding are defined at 310 CMR 10.57(2)(a) 1 through 3. As described in 310 CMR 10.57(2)(a) *"Isolated Land Subject to Flooding is an isolated depression or closed basin without an inlet or an outlet. It is an area which at least once a year confines standing water to a volume of at least ¼ acre-feet and to an average depth of at least six inches"*.

As described above in Section 2, Area W1 and W2 are located within closed basins that do not have an inlet or outlet, and do not have the storage capacity to contain a volume of at least ¼ acre-feet as described below. Table 3-1 depicts the storage volume calculations for Areas W1 and W2

Area W1 measures approximately 0.25 acres in size, but due to the sloping topography the maximum volume of water that can be confined within Area W1 prior to over-topping the depression is approximately 7,884 cubic feet and does not meet the requirement of being able to confine standing water to a volume of at least ¼ acre-feet. Therefore, Area W1 does not meet the criteria to be considered Isolated Land Subject to Flooding and is not subject to WPA jurisdiction.

Area W2 measures approximately 0.03 acres in size and has sloping topography as described above in Section 2. This area is not large enough or deep enough to confine standing water to a volume of at least ¼ acre-feet. Therefore, Area W2 does not meet the criteria to be considered Isolated Land Subject to Flooding and is not subject to WPA jurisdiction.

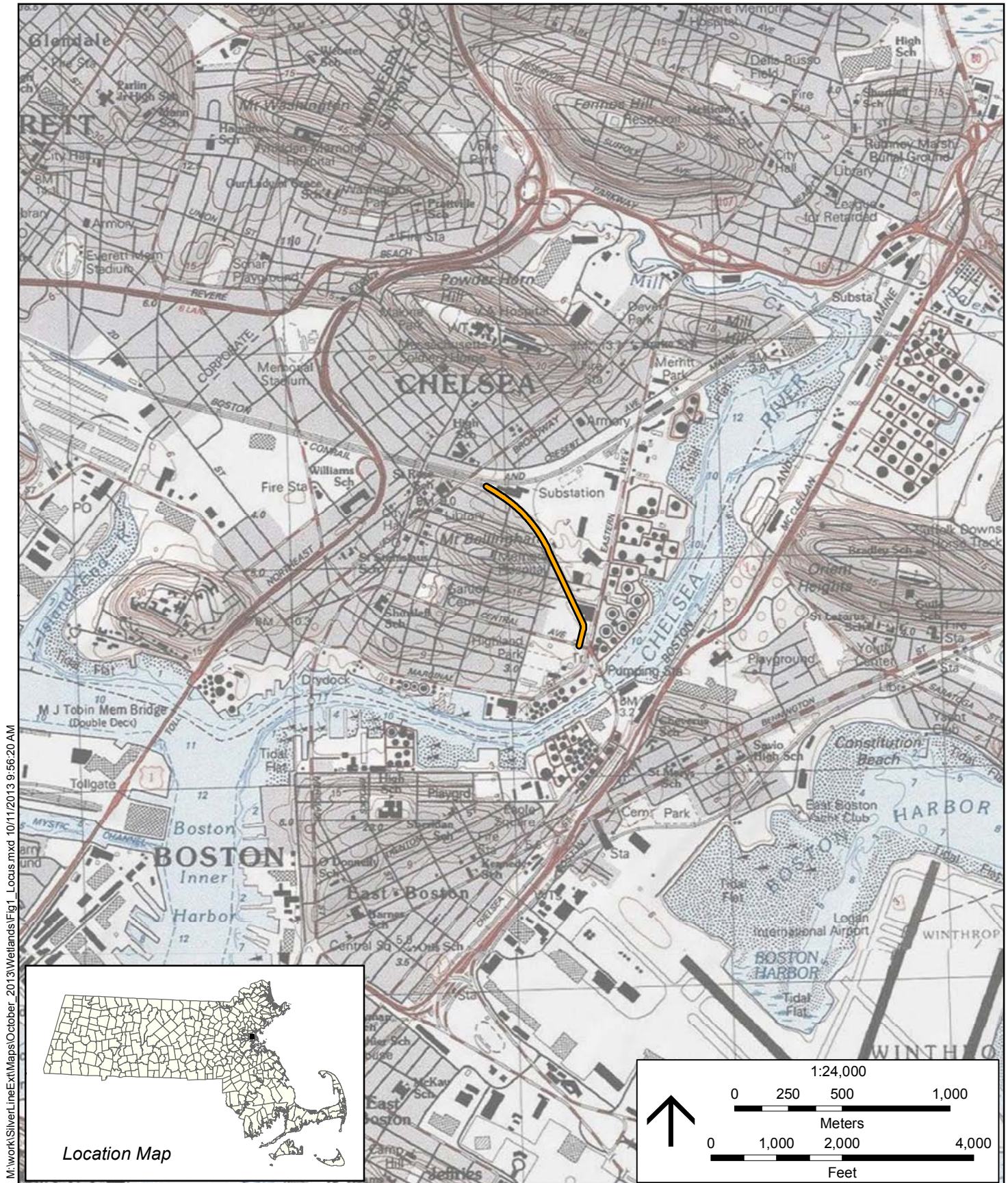
Areas UP3, UP4, and UP5 are not located within closed basins and lack storage capacity, therefore these areas do not meet the criteria to be considered Isolated Land Subject to Flooding and are not subject to WPA jurisdiction.

Table 3-1 Volume Calculations

| Area | Size (square feet) | Average Depth (feet) | Potential Maximum Storage Volume (cubic feet) |
|------|--------------------|----------------------|---|
| W1 | 10,748 +/- | 0.75 +/- | 7,884 +/- |
| W2 | 2,541 +/- | 0.80 +/- | 2,044 +/- |

Appendix A

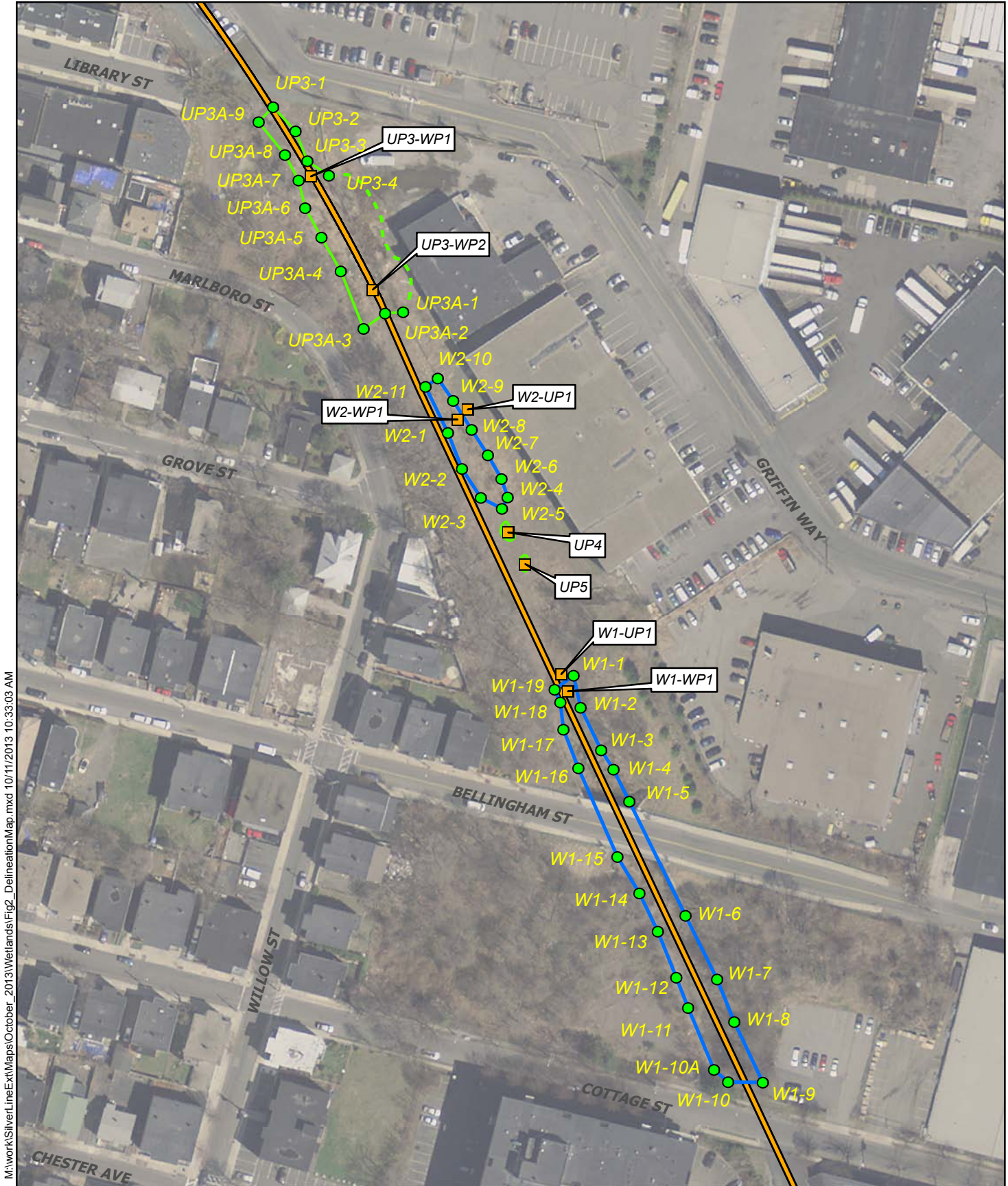
Figures



Portion of Boston North and Boston South
1:25000 USGS quadrangles.
Source: Esri

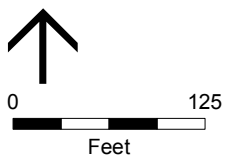
Proposed Project

Figure 1
Project Locus Map
Chelsea, Massachusetts



M:\work\SilverLine\Ext\Maps\October_2013\Wetlands\Fig2_DelineationMap.mxd 10/11/2013 10:33:03 AM

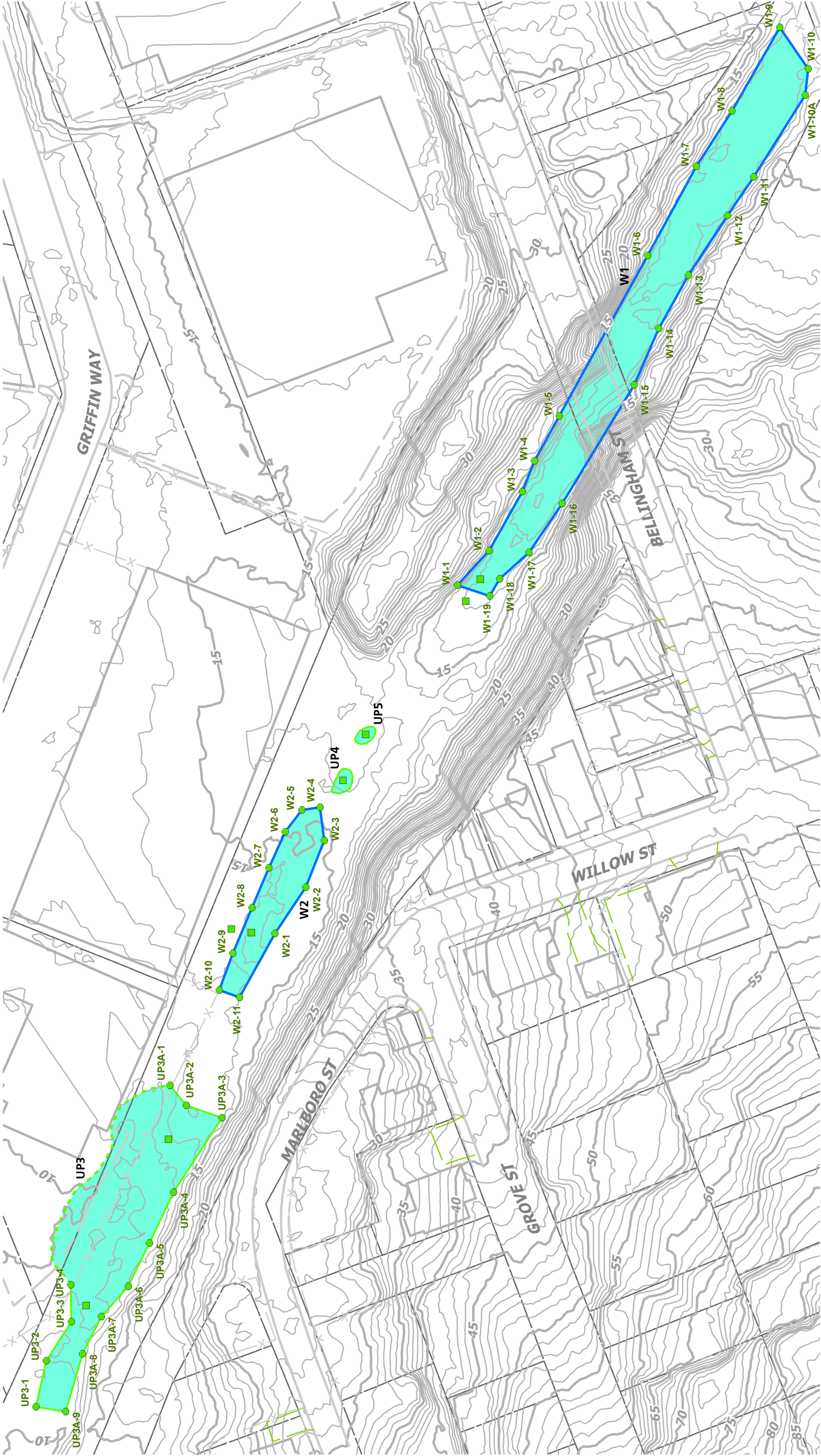
Aerial photo supplied by USGS. Date of photo: April 2013.



- Proposed Project
- Plot Locations
- Flag Locations
- Delineated Boundaries
- Non-wetland Phragmites Area
- - - Non-wetland Phragmites Area, Off-Site
- Wetland Boundary

Figure 2
Delineation Map
Chelsea, Massachusetts

October 2013



Data provided by MassGIS.



- Plot Location
- Flag Location
- Delineated Boundaries
- Non-wetland Phragmites Area
- Non-wetland Phragmites Area, Off-Site
- Wetland Boundary
- Delineated Area

Figure 3
Topographic Map

October 2013

Appendix B

BVW Datasheets

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

| Applicant: Massachusetts Department of Transportation | | | | Transect No. W1-UP1 | | |
|--|------------------|------------------------------------|--|-----------------------------------|-----------------|-----------------------------|
| Project location: Chelsea, Massachusetts | | | | DEP File No: | | |
| Prepared By: Scott Egan, CPSS | | | | Date of Delineation: June 4, 2013 | | |
| Check all that apply: | | | | | | |
| <input type="checkbox"/> Vegetation alone presumed adequate to delineate BVW: fill out Section I only | | | | | | |
| <input checked="" type="checkbox"/> Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II | | | | | | |
| <input type="checkbox"/> Method other than dominance test used (attach additional information) | | | | | | |
| Section I. Vegetation | | | | | | |
| Strata | Plant Species | Scientific Name | Percent Cover | Percent Dominance | Dominant Plant? | Wetland Indicator Category* |
| T | Norway maple | <i>Acer platanoides</i> | 28 | | Y | UPL |
| | | | | | | |
| H | Common plantain | <i>Plantago major</i> | 8 | 7.3% | | FACU |
| H | Red clover | <i>Trifolium pratense</i> | 13 | 11.9% | | FACU |
| H | Timothy grass | <i>Phleum pratense</i> | 18 | 16.5% | Y | FACU |
| H | Common mugwort | <i>Artemisia vulgaris</i> | 23 | 21.1% | Y | UPL |
| H | Oxeye daisy | <i>Leucanthemum vulgare</i> | 3 | 2.8% | | UPL |
| H | Goldenrod | <i>Solidago rugosa</i> | 13 | 11.9% | | FAC |
| H | Virginia creeper | <i>Parthenocissus quinquefolia</i> | 28 | 25.7% | Y | FACU |
| H | Common tansy | <i>Tanacetum vulgare</i> | 3 | 2.8% | | FACU |
| | | | | | | |
| | | | | | | |
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| | | | | | | |
| <small>* Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.</small> | | | | | | |
| Vegetation Conclusion | | | | | | |
| Number of dominant wetland indicator plants: 1 | | | Number of dominant non-wetland indicator plants: 3 | | | |
| Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? | | | | | | No |
| Percent of dominant wetland plants vs. non-wetland plants: | | | 25% | | | |

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

| Section II. Indicators of Hydrology | | | | | |
|--|----------------|----------|--------------|---|--|
| Soil Survey | | | | | |
| Is there a published soil survey for this site? Yes | | | | Location of Plot: Abandoned Railroad Right of Way, with extremely compacted and gravelly, disturbed soils. | |
| Title/date: Norfolk and Suffolk County, MA | | | | | |
| Map number: USDA Web Soil Survey | | | | | |
| Soil type mapped: Urban Land/Udorthents | | | | | |
| Hydric soil inclusions: No | | | | | |
| Are field observations consistent with soil survey? Yes | | | | | |
| Soil Profile Description | | | | | |
| Soil Horizon | Depth - Inches | Color | Soil Texture | Soil Mottling | Comments |
| A | 0-16 | 10YR 3/2 | FSL | | Extremely Gravelly |
| | | | | | Refusal at 16" |
| | | | | | |
| | | | | | |
| Remarks: | | | | | |
| Other Indicators of Hydrology: check all that apply and describe | | | | | |
| <input type="checkbox"/> Site inundated: No | | | | | |
| <input type="checkbox"/> Depth to free water in observation hole: | | | | | |
| <input type="checkbox"/> Depth to soil saturation in observation hole: | | | | | |
| <input type="checkbox"/> Water marks: | | | | | |
| <input type="checkbox"/> Drift lines: | | | | | |
| <input type="checkbox"/> Sediment deposits: | | | | | |
| <input type="checkbox"/> Drainage patterns in BVW: | | | | | |
| <input type="checkbox"/> Oxidized rhizospheres: | | | | | |
| <input type="checkbox"/> Water-stained leaves: | | | | | |
| <input type="checkbox"/> Recorded data (stream, lake or tidal gauge; aerial photo; other): | | | | | |
| X Other: Upland plot, no signs of hydrology observed | | | | | |
| Vegetation and Hydrology Conclusion | | | | | |
| Number of wetland indicator plants \geq number of non-wetland indicator plants? | | | yes | <input type="checkbox"/> | no <input checked="" type="checkbox"/> |
| Hydric soil present? | | | yes | <input type="checkbox"/> | no <input checked="" type="checkbox"/> |
| Other indicators of hydrology present? | | | yes | <input type="checkbox"/> | no <input checked="" type="checkbox"/> |
| Sample location is in a BVW? | | | yes | <input type="checkbox"/> | no <input checked="" type="checkbox"/> |

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DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

| Section II. Indicators of Hydrology | | | | | |
|--|----------------|-------|--|---------------|-------------------------------------|
| Soil Survey | | | | | |
| Is there a published soil survey for this site? Yes | | | Location of Plot: Abandoned Railroad Right of Way, with extremely compacted and gravelly, disturbed soils. no actual soils are present in this plot location. Substrate consists of pure railbed gravel with pieces that are 2-4" across in size. | | |
| Title/date: Norfolk and Suffolk County, MA | | | | | |
| Map number: USDA Web Soil Survey | | | | | |
| Soil type mapped: Urban Land/Udorthents | | | | | |
| Hydric soil inclusions: No | | | | | |
| Are field observations consistent with soil survey? Yes | | | | | |
| Soil Profile Description | | | | | |
| Soil Horizon | Depth - Inches | Color | Soil Texture | Soil Mottling | Comments |
| | | | | | No soils present in rail bed |
| | | | | | |
| | | | | | |
| | | | | | |
| Remarks: | | | | | |
| Other Indicators of Hydrology: check all that apply and describe | | | | | |
| <input checked="" type="checkbox"/> Site inundated: Surface water depth 6 inches | | | | | |
| <input type="checkbox"/> Depth to free water in observation hole: | | | | | |
| <input type="checkbox"/> Depth to soil saturation in observation hole: | | | | | |
| <input type="checkbox"/> Water marks: | | | | | |
| <input type="checkbox"/> Drift lines: | | | | | |
| <input type="checkbox"/> Sediment deposits: | | | | | |
| <input type="checkbox"/> Drainage patterns in BVW: | | | | | |
| <input type="checkbox"/> Oxidized rhizospheres: | | | | | |
| <input type="checkbox"/> Water-stained leaves: | | | | | |
| <input type="checkbox"/> Recorded data (stream, lake or tidal gauge; aerial photo; other): | | | | | |
| Other: | | | | | |
| Vegetation and Hydrology Conclusion | | | | | |
| Number of wetland indicator plants \geq number of non-wetland indicator plants? | | yes | <input checked="" type="checkbox"/> | no | <input type="checkbox"/> |
| Hydric soil present? | | yes | <input type="checkbox"/> | no | <input checked="" type="checkbox"/> |
| Other indicators of hydrology present? | | yes | <input checked="" type="checkbox"/> | no | <input type="checkbox"/> |
| Sample location is in a BVW? | | yes | <input checked="" type="checkbox"/> | no | <input type="checkbox"/> |

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

| Section II. Indicators of Hydrology | | | | | |
|--|----------------|-------|--------------|---|--|
| Soil Survey | | | | | |
| Is there a published soil survey for this site? Yes | | | | Location of Plot: Abandoned Railroad Right of Way, with extremely compacted and gravelly, disturbed soils. | |
| Title/date: Norfolk and Suffolk County, MA | | | | | |
| Map number: USDA Web Soil Survey | | | | | |
| Soil type mapped: Urban Land/Udorthents | | | | | |
| Hydric soil inclusions: No | | | | | |
| Are field observations consistent with soil survey? Yes | | | | | |
| Soil Profile Description | | | | | |
| Soil Horizon | Depth - Inches | Color | Soil Texture | Soil Mottling | Comments |
| 0-12 | 10YR 4/3 | | FSL | | Extremely Gravelly |
| | | | | | Refusal at 10-12" |
| | | | | | |
| | | | | | |
| Remarks: | | | | | |
| Other Indicators of Hydrology: check all that apply and describe | | | | | |
| <input type="checkbox"/> Site inundated: No | | | | | |
| <input type="checkbox"/> Depth to free water in observation hole: | | | | | |
| <input type="checkbox"/> Depth to soil saturation in observation hole: | | | | | |
| <input type="checkbox"/> Water marks: | | | | | |
| <input type="checkbox"/> Drift lines: | | | | | |
| <input type="checkbox"/> Sediment deposits: | | | | | |
| <input type="checkbox"/> Drainage patterns in BVW: | | | | | |
| <input type="checkbox"/> Oxidized rhizospheres: | | | | | |
| <input type="checkbox"/> Water-stained leaves: | | | | | |
| <input type="checkbox"/> Recorded data (stream, lake or tidal gauge; aerial photo; other): | | | | | |
| Other: | | | | | |
| Vegetation and Hydrology Conclusion | | | | | |
| Number of wetland indicator plants \geq number of non-wetland indicator plants? | | | yes | <input type="checkbox"/> | no <input checked="" type="checkbox"/> |
| Hydric soil present? | | | yes | <input type="checkbox"/> | no <input checked="" type="checkbox"/> |
| Other indicators of hydrology present? | | | yes | <input type="checkbox"/> | no <input checked="" type="checkbox"/> |
| Sample location is in a BVW? | | | yes | <input type="checkbox"/> | no <input checked="" type="checkbox"/> |

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

| Section II. Indicators of Hydrology | | | | | |
|---|----------------|-------|-------------------------------------|--|-------------------------------------|
| Soil Survey | | | | | |
| Is there a published soil survey for this site? Yes | | | | Location of Plot: Abandoned Railroad Right of Way, with extremely compacted and gravelly, disturbed soils. no actual soils are present in this plot location. Substrate consists of pure railbed gravel with pieces that are 2-4" across in size. | |
| Title/date: Norfolk and Suffolk County, MA | | | | | |
| Map number: USDA Web Soil Survey | | | | | |
| Soil type mapped: Urban Land/Udorthents | | | | | |
| Hydric soil inclusions: No | | | | | |
| Are field observations consistent with soil survey? Yes | | | | | |
| Soil Profile Description | | | | | |
| Soil Horizon | Depth - Inches | Color | Soil Texture | Soil Mottling | Comments |
| 0-6 | 10YR 2/1 | | FSL | | Extremely Gravelly |
| 6-12 | 10YR 5/1 | | SIL | 10YR 4/6 | Extremely Gravelly |
| | | | | | |
| | | | | | |
| Remarks: | | | | | |
| Other Indicators of Hydrology: check all that apply and describe | | | | | |
| <input checked="" type="checkbox"/> Site inundated: Surface water depth 6 inches | | | | | |
| <input type="checkbox"/> Depth to free water in observation hole: | | | | | |
| <input checked="" type="checkbox"/> Depth to soil saturation in observation hole: 0 inches | | | | | |
| <input type="checkbox"/> Water marks: | | | | | |
| <input type="checkbox"/> Drift lines: | | | | | |
| <input type="checkbox"/> Sediment deposits: | | | | | |
| <input type="checkbox"/> Drainage patterns in BVW: | | | | | |
| <input checked="" type="checkbox"/> Oxidized rhizospheres: Depleted matrix, Redox dark surfaces visible | | | | | |
| <input type="checkbox"/> Water-stained leaves: | | | | | |
| <input type="checkbox"/> Recorded data (stream, lake or tidal gauge; aerial photo; other): | | | | | |
| Other: | | | | | |
| Vegetation and Hydrology Conclusion | | | | | |
| Number of wetland indicator plants \geq number of non-wetland indicator plants? | | yes | <input checked="" type="checkbox"/> | no | <input type="checkbox"/> |
| Hydric soil present? | | yes | <input type="checkbox"/> | no | <input checked="" type="checkbox"/> |
| Other indicators of hydrology present? | | yes | <input checked="" type="checkbox"/> | no | <input type="checkbox"/> |
| Sample location is in a BVW? | | yes | <input checked="" type="checkbox"/> | no | <input type="checkbox"/> |

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

| Applicant: Massachusetts Department of Transportation | | | | Transect No. UP3-P1 | | |
|---|--------------------|------------------------------------|--|-----------------------------------|-----------------|-----------------------------|
| Project location: Chelsea, Massachusetts | | | | DEP File No: | | |
| Prepared By: Scott Egan, CPSS | | | | Date of Delineation: June 4, 2013 | | |
| Check all that apply: | | | | | | |
| <input type="checkbox"/> Vegetation alone presumed adequate to delineate BVW: fill out Section I only | | | | | | |
| <input checked="" type="checkbox"/> Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II | | | | | | |
| <input type="checkbox"/> Method other than dominance test used (attach additional information) | | | | | | |
| Section I. Vegetation | | | | | | |
| Strata | Plant Species | Scientific Name | Percent Cover | Percent Dominance | Dominant Plant? | Wetland Indicator Category* |
| S | Black locust | <i>Robinia pseudoacacia</i> | 18 | 36.7 | Y | FACU |
| S | Black raspberry | <i>Rubus occidentalis</i> | 26 | 53 | Y | UPL |
| S | Multiflora rose | <i>Rosa multiflora</i> | 8 | 10.9 | | FACU |
| | | | | | | |
| H | Orchard grass | <i>Dactylis glomerata</i> | 8 | 9.3% | | FACU |
| H | Common mugwort | <i>Artemisia vulgaris</i> | 13 | 15.1% | Y | UPL |
| H | Goldenrod | <i>Solidago rugosa</i> | 8 | 9.3% | | FAC |
| H | Kentucky bluegrass | <i>Poa pratensis</i> | 13 | 15.1% | | FACU |
| H | Bladder campion | <i>Silene cucubalus</i> | 3 | 3.5% | | UPL |
| H | Phragmites | <i>Phragmites australis</i> | 33 | 38.4% | Y | FACW |
| H | Virginia creeper | <i>Parthenocissus quinquefolia</i> | 8 | 9.3% | | FACU |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| <small>* Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus <i>Sphagnum</i>; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.</small> | | | | | | |
| Vegetation Conclusion | | | | | | |
| Number of dominant wetland indicator plants: 1 | | | Number of dominant non-wetland indicator plants: 3 | | | |
| Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? | | | | | | No |
| Percent of dominant wetland plants vs. non-wetland plants: | | | | | | 33% |

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

| Section II. Indicators of Hydrology | | | | | |
|--|----------------|----------|--------------|---|--|
| Soil Survey | | | | | |
| Is there a published soil survey for this site? Yes | | | | Location of Plot: Abandoned Railroad Right of Way, with extremely compacted and gravelly, disturbed soils. | |
| Title/date: Norfolk and Suffolk County, MA | | | | | |
| Map number: USDA Web Soil Survey | | | | | |
| Soil type mapped: Urban Land/Udorthents | | | | | |
| Hydric soil inclusions: No | | | | | |
| Are field observations consistent with soil survey? Yes | | | | | |
| Soil Profile Description | | | | | |
| Soil Horizon | Depth - Inches | Color | Soil Texture | Soil Mottling | Comments |
| A | 0-4 | 10YR 3/2 | FSL | | Extremely Gravelly |
| B | 4-16 | 10YR 3/3 | FSL | | Refusal at 12-16" |
| | | | | | |
| | | | | | |
| Remarks: | | | | | |
| Other Indicators of Hydrology: check all that apply and describe | | | | | |
| <input type="checkbox"/> Site inundated: No | | | | | |
| <input type="checkbox"/> Depth to free water in observation hole: | | | | | |
| <input type="checkbox"/> Depth to soil saturation in observation hole: | | | | | |
| <input type="checkbox"/> Water marks: | | | | | |
| <input type="checkbox"/> Drift lines: | | | | | |
| <input type="checkbox"/> Sediment deposits: | | | | | |
| <input type="checkbox"/> Drainage patterns in BVW: | | | | | |
| <input type="checkbox"/> Oxidized rhizospheres: | | | | | |
| <input type="checkbox"/> Water-stained leaves: | | | | | |
| <input type="checkbox"/> Recorded data (stream, lake or tidal gauge; aerial photo; other): | | | | | |
| X Other: Upland plot, no signs of hydrology observed | | | | | |
| Vegetation and Hydrology Conclusion | | | | | |
| Number of wetland indicator plants \geq number of non-wetland indicator plants? | | | yes | <input type="checkbox"/> | no <input checked="" type="checkbox"/> |
| Hydric soil present? | | | yes | <input type="checkbox"/> | no <input checked="" type="checkbox"/> |
| Other indicators of hydrology present? | | | yes | <input type="checkbox"/> | no <input checked="" type="checkbox"/> |
| Sample location is in a BVW? | | | yes | <input type="checkbox"/> | no <input checked="" type="checkbox"/> |

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

| Applicant: Massachusetts Department of Transportation | | | | Transect No. UP3-P2 | | |
|---|--------------------|-----------------------------|--|-----------------------------------|-----------------|-----------------------------|
| Project location: Chelsea, Massachusetts | | | | DEP File No: | | |
| Prepared By: Scott Egan, CPSS | | | | Date of Delineation: June 4, 2013 | | |
| Check all that apply: | | | | | | |
| <input type="checkbox"/> Vegetation alone presumed adequate to delineate BVW: fill out Section I only | | | | | | |
| <input checked="" type="checkbox"/> Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II | | | | | | |
| <input type="checkbox"/> Method other than dominance test used (attach additional information) | | | | | | |
| Section I. Vegetation | | | | | | |
| Strata | Plant Species | Scientific Name | Percent Cover | Percent Dominance | Dominant Plant? | Wetland Indicator Category* |
| H | Orchard grass | <i>Dactylis glomerata</i> | 18 | 14.6% | Y | FACU |
| H | Common mugwort | <i>Artemisia vulgaris</i> | 3 | 2.4% | | UPL |
| H | Goldenrod | <i>Solidago rugosa</i> | 8 | 6.5% | | FAC |
| H | Oxeye daisy | <i>Leucanthemum vulgare</i> | 3 | 2.4% | | UPL |
| H | Red clover | <i>Trifolium pratense</i> | 13 | 10.6% | Y | FACU |
| H | Kentucky bluegrass | <i>Poa pratensis</i> | 33 | 26.8% | | FACU |
| H | Bladder campion | <i>Silene cucubalus</i> | 3 | 2.4% | | UPL |
| H | Phragmites | <i>Phragmites australis</i> | 23 | 18.7% | Y | FACW |
| H | Purple loostrife | <i>Lythrum salicaria</i> | 8 | 14.6% | | OBL |
| H | Hairy lespedeza | <i>Lespedeza hirta</i> | 8 | 2.4% | | UPL |
| H | Common plantain | <i>Plantago major</i> | 3 | 6.5% | | FACU |
| | | | | | | |
| | | | | | | |
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| | | | | | | |
| <small>* Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus <i>Sphagnum</i>; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.</small> | | | | | | |
| Vegetation Conclusion | | | | | | |
| Number of dominant wetland indicator plants: 1 | | | Number of dominant non-wetland indicator plants: 2 | | | |
| Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? | | | | | | No |
| Percent of dominant wetland plants vs. non-wetland plants: | | | 33% | | | |

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

| Section II. Indicators of Hydrology | | | | | |
|--|----------------|----------|--------------------------|---|-------------------------------------|
| Soil Survey | | | | | |
| Is there a published soil survey for this site? Yes | | | | Location of Plot: Abandoned Railroad Right of Way, with extremely compacted and gravelly, disturbed soils. | |
| Title/date: Norfolk and Suffolk County, MA | | | | | |
| Map number: USDA Web Soil Survey | | | | | |
| Soil type mapped: Urban Land/Udorthents | | | | | |
| Hydric soil inclusions: No | | | | | |
| Are field observations consistent with soil survey? Yes | | | | | |
| Soil Profile Description | | | | | |
| Soil Horizon | Depth - Inches | Color | Soil Texture | Soil Mottling | Comments |
| A | 0-4 | 10YR 3/2 | FSL | | Extremely Gravelly |
| B | 4-16 | 10YR 3/3 | FSL | | Refusal at 12-16" |
| | | | | | |
| | | | | | |
| Remarks: | | | | | |
| Other Indicators of Hydrology: check all that apply and describe | | | | | |
| <input type="checkbox"/> Site inundated: No | | | | | |
| <input type="checkbox"/> Depth to free water in observation hole: | | | | | |
| <input type="checkbox"/> Depth to soil saturation in observation hole: | | | | | |
| <input type="checkbox"/> Water marks: | | | | | |
| <input type="checkbox"/> Drift lines: | | | | | |
| <input type="checkbox"/> Sediment deposits: | | | | | |
| <input type="checkbox"/> Drainage patterns in BVW: | | | | | |
| <input type="checkbox"/> Oxidized rhizospheres: | | | | | |
| <input type="checkbox"/> Water-stained leaves: | | | | | |
| <input type="checkbox"/> Recorded data (stream, lake or tidal gauge; aerial photo; other): | | | | | |
| X Other: Upland plot, no signs of hydrology observed | | | | | |
| Vegetation and Hydrology Conclusion | | | | | |
| Number of wetland indicator plants \geq number of non-wetland indicator plants? | | yes | <input type="checkbox"/> | no | <input checked="" type="checkbox"/> |
| Hydric soil present? | | yes | <input type="checkbox"/> | no | <input checked="" type="checkbox"/> |
| Other indicators of hydrology present? | | yes | <input type="checkbox"/> | no | <input checked="" type="checkbox"/> |
| Sample location is in a BVW? | | yes | <input type="checkbox"/> | no | <input checked="" type="checkbox"/> |

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

| Applicant: Massachusetts Department of Transportation | | | | Transect No. UP4-P1 | | |
|---|--------------------|------------------------------------|--|-----------------------------------|-----------------|-----------------------------|
| Project location: Chelsea, Massachusetts | | | | DEP File No: | | |
| Prepared By: Scott Egan, CPSS | | | | Date of Delineation: June 4, 2013 | | |
| Check all that apply: | | | | | | |
| <input type="checkbox"/> Vegetation alone presumed adequate to delineate BVW: fill out Section I only | | | | | | |
| <input checked="" type="checkbox"/> Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II | | | | | | |
| <input type="checkbox"/> Method other than dominance test used (attach additional information) | | | | | | |
| Section I. Vegetation | | | | | | |
| Strata | Plant Species | Scientific Name | Percent Cover | Percent Dominance | Dominant Plant? | Wetland Indicator Category* |
| H | Orchard grass | <i>Dactylis glomerata</i> | 23 | 15.6% | Y | FACU |
| H | Common mugwort | <i>Artemisia vulgaris</i> | 18 | 12.2% | | UPL |
| H | Common plantain | <i>Plantago major</i> | 3 | 2.0% | | FACU |
| H | Oxeye daisy | <i>Leucanthemum vulgare</i> | 13 | 8.8% | | UPL |
| H | Red clover | <i>Trifolium pratense</i> | 33 | 22.4% | Y | FACU |
| H | Kentucky bluegrass | <i>Poa pratensis</i> | 18 | 12.2% | | FACU |
| H | Phragmites | <i>Phragmites australis</i> | 28 | 19.0% | Y | FACW |
| H | Crownvetch | <i>Coronilla varia</i> | 8 | 5.4% | | UPL |
| H | Virginia creeper | <i>Parthenocissus quinquefolia</i> | 3 | 15.6% | | FACU |
| | | | | | | |
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| <small>* Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus <i>Sphagnum</i>; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.</small> | | | | | | |
| Vegetation Conclusion | | | | | | |
| Number of dominant wetland indicator plants: 1 | | | Number of dominant non-wetland indicator plants: 2 | | | |
| Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? | | | | | | No |
| Percent of dominant wetland plants vs. non-wetland plants: | | | 33% | | | |

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

| Section II. Indicators of Hydrology | | | | | |
|--|----------------|----------|------------------------------|---|--------------------|
| Soil Survey | | | | | |
| Is there a published soil survey for this site? Yes | | | | Location of Plot: Abandoned Railroad Right of Way, with extremely compacted and gravelly, disturbed soils. | |
| Title/date: Norfolk and Suffolk County, MA | | | | | |
| Map number: USDA Web Soil Survey | | | | | |
| Soil type mapped: Urban Land/Udorthents | | | | | |
| Hydric soil inclusions: No | | | | | |
| Are field observations consistent with soil survey? Yes | | | | | |
| Soil Profile Description | | | | | |
| Soil Horizon | Depth - Inches | Color | Soil Texture | Soil Mottling | Comments |
| A | 0-4 | 10YR 4/2 | FSL | | Extremely Gravelly |
| B | 4-16 | 2.5Y 5/4 | FSL | | Refusal at 12-16" |
| | | | | | |
| | | | | | |
| Remarks: | | | | | |
| Other Indicators of Hydrology: check all that apply and describe | | | | | |
| <input type="checkbox"/> Site inundated: No | | | | | |
| <input type="checkbox"/> Depth to free water in observation hole: | | | | | |
| <input type="checkbox"/> Depth to soil saturation in observation hole: | | | | | |
| <input type="checkbox"/> Water marks: | | | | | |
| <input type="checkbox"/> Drift lines: | | | | | |
| <input type="checkbox"/> Sediment deposits: | | | | | |
| <input type="checkbox"/> Drainage patterns in BVW: | | | | | |
| <input type="checkbox"/> Oxidized rhizospheres: | | | | | |
| <input type="checkbox"/> Water-stained leaves: | | | | | |
| <input type="checkbox"/> Recorded data (stream, lake or tidal gauge; aerial photo; other): | | | | | |
| X Other: Upland plot, no signs of hydrology observed | | | | | |
| Vegetation and Hydrology Conclusion | | | | | |
| Number of wetland indicator plants \geq number of non-wetland indicator plants? | | | yes <input type="checkbox"/> | no <input checked="" type="checkbox"/> | |
| Hydric soil present? | | | yes <input type="checkbox"/> | no <input checked="" type="checkbox"/> | |
| Other indicators of hydrology present? | | | yes <input type="checkbox"/> | no <input checked="" type="checkbox"/> | |
| Sample location is in a BVW? | | | yes <input type="checkbox"/> | no <input checked="" type="checkbox"/> | |

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

| Applicant: Massachusetts Department of Transportation | | | | Transect No. UP5-P1 | | |
|---|--------------------|------------------------------------|--|-----------------------------------|-----------------|-----------------------------|
| Project location: Chelsea, Massachusetts | | | | DEP File No: | | |
| Prepared By: Scott Egan, CPSS | | | | Date of Delineation: June 4, 2013 | | |
| Check all that apply: | | | | | | |
| <input type="checkbox"/> Vegetation alone presumed adequate to delineate BVW: fill out Section I only | | | | | | |
| <input checked="" type="checkbox"/> Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II | | | | | | |
| <input type="checkbox"/> Method other than dominance test used (attach additional information) | | | | | | |
| Section I. Vegetation | | | | | | |
| Strata | Plant Species | Scientific Name | Percent Cover | Percent Dominance | Dominant Plant? | Wetland Indicator Category* |
| H | Orchard grass | <i>Dactylis glomerata</i> | 23 | 15.6% | Y | FACU |
| H | Oxeye daisy | <i>Leucanthemum vulgare</i> | 13 | 8.8% | | UPL |
| H | Common plantain | <i>Plantago major</i> | 3 | 2.0% | | FACU |
| H | Virginia creeper | <i>Parthenocissus quinquefolia</i> | 3 | 2.0% | | FACU |
| H | Red clover | <i>Trifolium pratense</i> | 33 | 22.4% | Y | FACU |
| H | Kentucky bluegrass | <i>Poa pratensis</i> | 18 | 12.2% | | FACU |
| H | Phragmites | <i>Phragmites australis</i> | 28 | 19.0% | Y | FACW |
| H | Timothy grass | <i>Phleum pratense</i> | 8 | 5.4% | | FACU |
| | | | | | | |
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| <small>* Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus <i>Sphagnum</i>; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.</small> | | | | | | |
| Vegetation Conclusion | | | | | | |
| Number of dominant wetland indicator plants: 1 | | | Number of dominant non-wetland indicator plants: 2 | | | |
| Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? | | | | | | No |
| Percent of dominant wetland plants vs. non-wetland plants: | | | | | | 33% |

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

| Section II. Indicators of Hydrology | | | | | |
|--|----------------|----------|------------------------------|---|--------------------|
| Soil Survey | | | | | |
| Is there a published soil survey for this site? Yes | | | | Location of Plot: Abandoned Railroad Right of Way, with extremely compacted and gravelly, disturbed soils. | |
| Title/date: Norfolk and Suffolk County, MA | | | | | |
| Map number: USDA Web Soil Survey | | | | | |
| Soil type mapped: Urban Land/Udorthents | | | | | |
| Hydric soil inclusions: No | | | | | |
| Are field observations consistent with soil survey? Yes | | | | | |
| Soil Profile Description | | | | | |
| Soil Horizon | Depth - Inches | Color | Soil Texture | Soil Mottling | Comments |
| A | 0-4 | 10YR 4/2 | FSL | | Extremely Gravelly |
| B | 4-16 | 2.5Y 5/4 | FSL | | Refusal at 12-16" |
| | | | | | |
| | | | | | |
| Remarks: | | | | | |
| Other Indicators of Hydrology: check all that apply and describe | | | | | |
| <input type="checkbox"/> Site inundated: No | | | | | |
| <input type="checkbox"/> Depth to free water in observation hole: | | | | | |
| <input type="checkbox"/> Depth to soil saturation in observation hole: | | | | | |
| <input type="checkbox"/> Water marks: | | | | | |
| <input type="checkbox"/> Drift lines: | | | | | |
| <input type="checkbox"/> Sediment deposits: | | | | | |
| <input type="checkbox"/> Drainage patterns in BVW: | | | | | |
| <input type="checkbox"/> Oxidized rhizospheres: | | | | | |
| <input type="checkbox"/> Water-stained leaves: | | | | | |
| <input type="checkbox"/> Recorded data (stream, lake or tidal gauge; aerial photo; other): | | | | | |
| X Other: Upland plot, no signs of hydrology observed | | | | | |
| Vegetation and Hydrology Conclusion | | | | | |
| Number of wetland indicator plants \geq number of non-wetland indicator plants? | | | yes <input type="checkbox"/> | no <input checked="" type="checkbox"/> | |
| Hydric soil present? | | | yes <input type="checkbox"/> | no <input checked="" type="checkbox"/> | |
| Other indicators of hydrology present? | | | yes <input type="checkbox"/> | no <input checked="" type="checkbox"/> | |
| Sample location is in a BVW? | | | yes <input type="checkbox"/> | no <input checked="" type="checkbox"/> | |

Appendix C

Site Photographs




PHOTOGRAPHIC LOG

| | | | |
|--|------------------------|---|--------------------|
| Client Name: MassDOT | | Site Location: Chelsea, MA | Project No. |
| Photo No. 1 | Date: 6/4/13 |  | |
| Description: W1-WP1 Wetland Plot | | | |

| | | |
|---|------------------------|--|
| Photo No. 2 | Date: 6/4/13 |  |
| Description: W1-UP1 Upland Plot | | |



PHOTOGRAPHIC LOG

| | | | |
|--|------------------------|---|--------------------|
| Client Name: MassDOT | | Site Location: Chelsea, MA | Project No. |
| Photo No. 3 | Date: 6/4/13 |  | |
| Description: W2-WP1 Wetland Plot | | | |

| | | |
|---|------------------------|--|
| Photo No. 4 | Date: 6/4/13 |  |
| Description: W2-UP1 Upland Plot | | |



PHOTOGRAPHIC LOG

| | | | |
|---|--------------|---|--------------------|
| Client Name: MassDOT | | Site Location: Chelsea, MA | Project No. |
| Photo No. 5 | Date: |  | |
| Description: UP3-P1 Vegetation Plot/non-wetland | | | |

| | | |
|---|--------------|--|
| Photo No. 6 | Date: |  |
| Description: UP3-P2 Vegetation Plot/non-wetland | | |



PHOTOGRAPHIC LOG

| | | | |
|---|--------------|---|--------------------|
| Client Name: MassDOT | | Site Location: Chelsea, MA | Project No. |
| Photo No. 7 | Date: |  | |
| Description: Wetland W1 View looking south of Bellingham Street Bridge | | | |

| | | |
|---|--------------|--|
| Photo No. 8 | Date: |  |
| Description: Wetland W1 View looking north of Bellingham Street Bridge | | |




PHOTOGRAPHIC LOG

| | | | |
|--|------------------------|---|--------------------|
| Client Name: MassDOT | | Site Location: Chelsea, MA | Project No. |
| Photo No. 9 | Date: 6/4/13 |  | |
| Description: Wetland W1 View looking south under Bellingham Street Bridge | | | |

| | | |
|--|------------------------|--|
| Photo No. 10 | Date: 6/4/13 |  |
| Description: Wetland W2 View looking south | | |



PHOTOGRAPHIC LOG


| | | | |
|--|------------------------|---|--------------------|
| Client Name: MassDOT | | Site Location: Chelsea, MA | Project No. |
| Photo No. 11 | Date: 6/4/13 |  | |
| Description: UP-4 Small patch of Phragmites in uplands | | | |

| | | |
|--|------------------------|--|
| Photo No. 12 | Date: 6/4/13 |  |
| Description: UP-5 Small patch of Phragmites in uplands | | |



PHOTOGRAPHIC LOG


| | | | |
|---|------------------------|---|--------------------|
| Client Name: MassDOT | | Site Location: Chelsea, MA | Project No. |
| Photo No. 13 | Date: 6/4/13 |  | |
| Description: Upland Areas of ROW View northwest behind MWRA complex at Library Street | | | |

| | | |
|--|------------------------|--|
| Photo No. 14 | Date: 6/4/13 |  |
| Description: Upland Areas of ROW View southeast behind MWRA complex at Highland Street | | |



PHOTOGRAPHIC LOG

| | | | |
|--|------------------------|---|--------------------|
| Client Name: MassDOT | | Site Location: Chelsea, MA | Project No. |
| Photo No. 15 | Date: 6/4/13 |  | |
| Description: Upland Areas of ROW View northwest behind MWRA complex at Highland Street | | | |



| | | |
|--|------------------------|--|
| Photo No. 16 | Date: 6/4/13 |  |
| Description: Upland Areas of ROW View northwest behind MWRA complex from just north of Highland Street to junction with Rockport Commuter Rail line. | | |



PHOTOGRAPHIC LOG

| | | | |
|--|------------------------|-----------------------------------|--------------------|
| Client Name: MassDOT | | Site Location: Chelsea, MA | Project No. |
| Photo No. 17 | Date: 6/4/13 | | |
| Description: Upland Areas of ROW View southeast from Cottage Street | | | |

| | | |
|--|------------------------|--|
| Photo No. 18 | Date: 6/4/13 | |
| Description: Upland Areas of ROW View southeast from parking lot of trucking facility off of Eastern Avenue | | |

| | | | |
|---|--------------------------------|---|--|
|  | | <p>PHOTOGRAPHIC LOG</p> | |
| <p>Client Name: MassDOT</p> | | <p>Site Location: Chelsea, MA</p> | |
| <p>Project No.</p> | | | |
| <p>Photo No. 19</p> | <p>Date: 6/4/13</p> |  | |
| <p>Description: Off Site Area Gravel parking lot with shallow puddles and phragmites, off-site adjacent to UP3.</p> | | | |